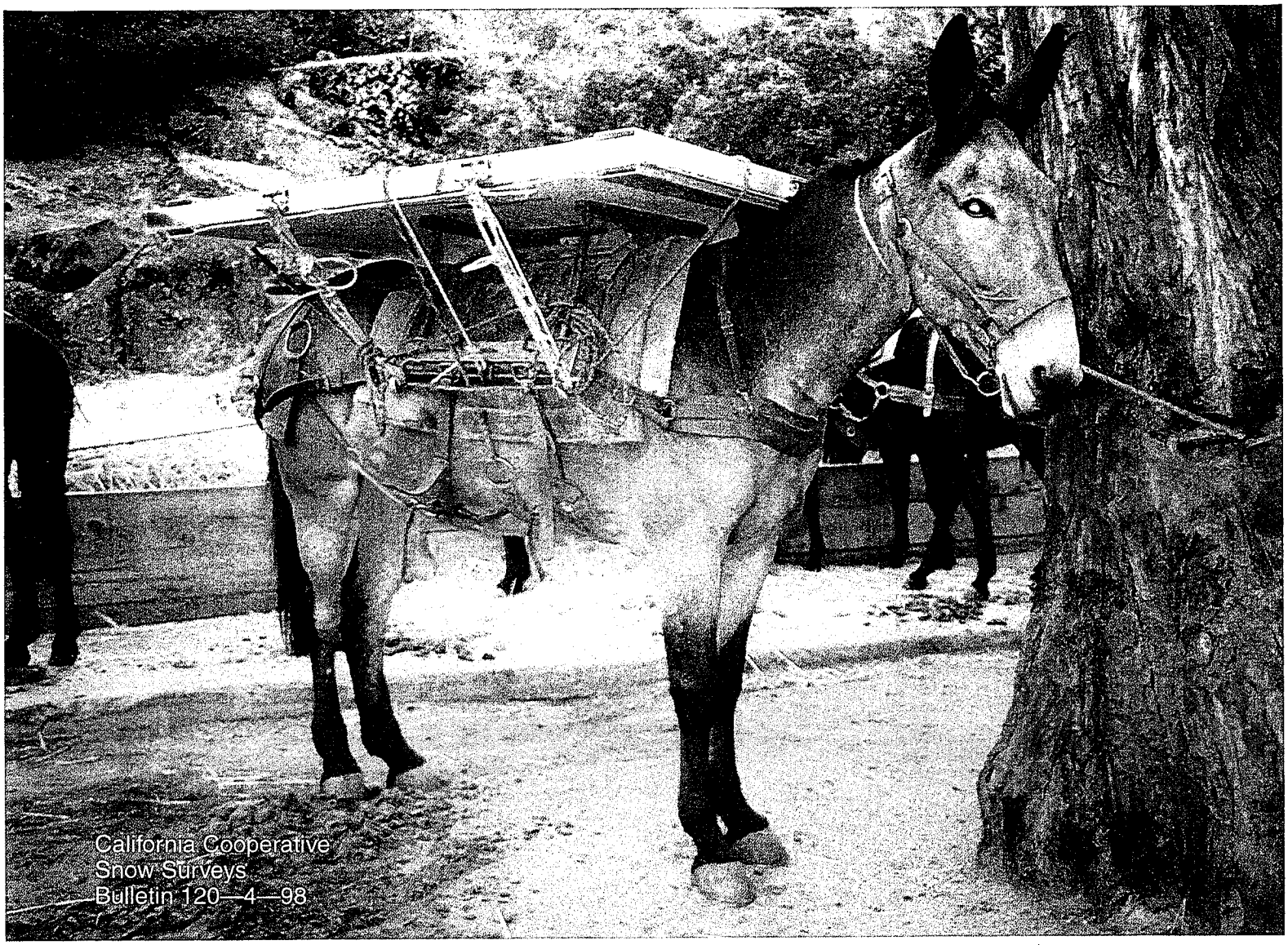

State of California
The Resources Agency

Department of
Water Resources

Water Conditions in California

Report 4 May 1, 1998

Pete Wilson
Governor
State of California

Douglas P. Wheeler
Secretary for Resources
The Resources Agency

David N. Kennedy
Director
Department of Water Resources

STATE OF CALIFORNIA
Pete Wilson, Governor

THE RESOURCES AGENCY
Douglas P. Wheeler, Secretary for Resources

Department of Water Resources
David N. Kennedy, Director

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Robert G. Potter
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COOPERATING AGENCIES

Public Agencies
Buena Vista Water Storage District
San Joaquin Exchange Contractors Water Association
East Bay Municipal Utility District
Friant Water Users Association
Kaweah Delta Water Conservation District
Kern Delta Water District
Kings River Conservation District
Lower Tule River Irrigation District
Merced Irrigation District
Modesto Irrigation District
Nevada Irrigation District
North Kern Water Storage District
Northern California Power Agency
Oakdale Irrigation District
Omochumne-Hartnell Water District
Oroville-Wyandotte Irrigation District
Placer County Water Agency
Sacramento Municipal Utility District
South San Joaquin Irrigation District
Tri-Dam Project
Tulare Lake Basin Water Storage District
Turlock Irrigation District
Yuba County Water Agency

Private Organizations
J.G. Boswell Company
Kaweah and St. Johns River Association
Kings River Water Association
Tule River Association
State Water Contractors

Municipalities
City of Bakersfield Water Department
City of Los Angeles Department of Water and Power
City and County of San Francisco Hetch Hetchy Water and Power

State Agencies
University of California, Central Sierra Snow Laboratory
California Department of Forestry & Fire Protection
California Department of Water Resources

Public Utilities
Pacific Gas and Electric Company
Southern California Edison Company

Federal Agencies
U.S. Department of Agriculture
Forest Service (14 National Forests)
Natural Resource Conservation Service
U.S. Department of Commerce
National Weather Service
U.S. Department of Interior
Bureau of Reclamation
Geological Survey, Water Resources
National Park Service (3 National Parks)
U.S. Department of Army
Corps of Engineers

Other Cooperative Programs
Nevada Cooperative Snow Surveys
Oregon Cooperative Snow Surveys

SUMMARY OF WATER CONDITIONS
MAY 1, 1998

Snowmelt began during the third week in April this year, a couple of weeks later than normal. Cool storms during the first two weeks added around 5 percent to the pack before it started melting and ensured above normal precipitation during April for the fourth month in a row. Snowmelt runoff forecasts in Central Valley rivers have been raised some 10 percent from those of a month ago. Water supply prospects continue to be excellent.

Forecasts of April through July runoff are about 165 percent of average statewide compared to 80 percent last year. Highest amounts are in the North Coast and Tulare Lake regions. Water year runoff percentages are almost the same at about 160 percent.

Snowpack water content is approximately 190 percent of average for this date and 150 percent of the average April 1 accumulation. Last year the May 1 snowpack was only 55 percent of average. Melting during April was less than normal but the snow water content did decrease around 10 percent during the month.

Precipitation during April was estimated to be 125 percent of average statewide. The seasonal total since October 1 is about 160 percent of average. Last year seasonal precipitation stood at 120 percent.

Runoff so far this season has been about 155 percent of average compared to 175 percent last year at this time. April runoff was nearly 140 percent of average for the month. Estimated runoff of the 8 major rivers of the Sacramento and San Joaquin River regions during April was 4.6 million acre-feet.

Reservoir storage gains during April were about normal, with storage percentages essentially unchanged at 115 percent of average overall for this date. This is slightly more than the 110 percent of average reported last year.

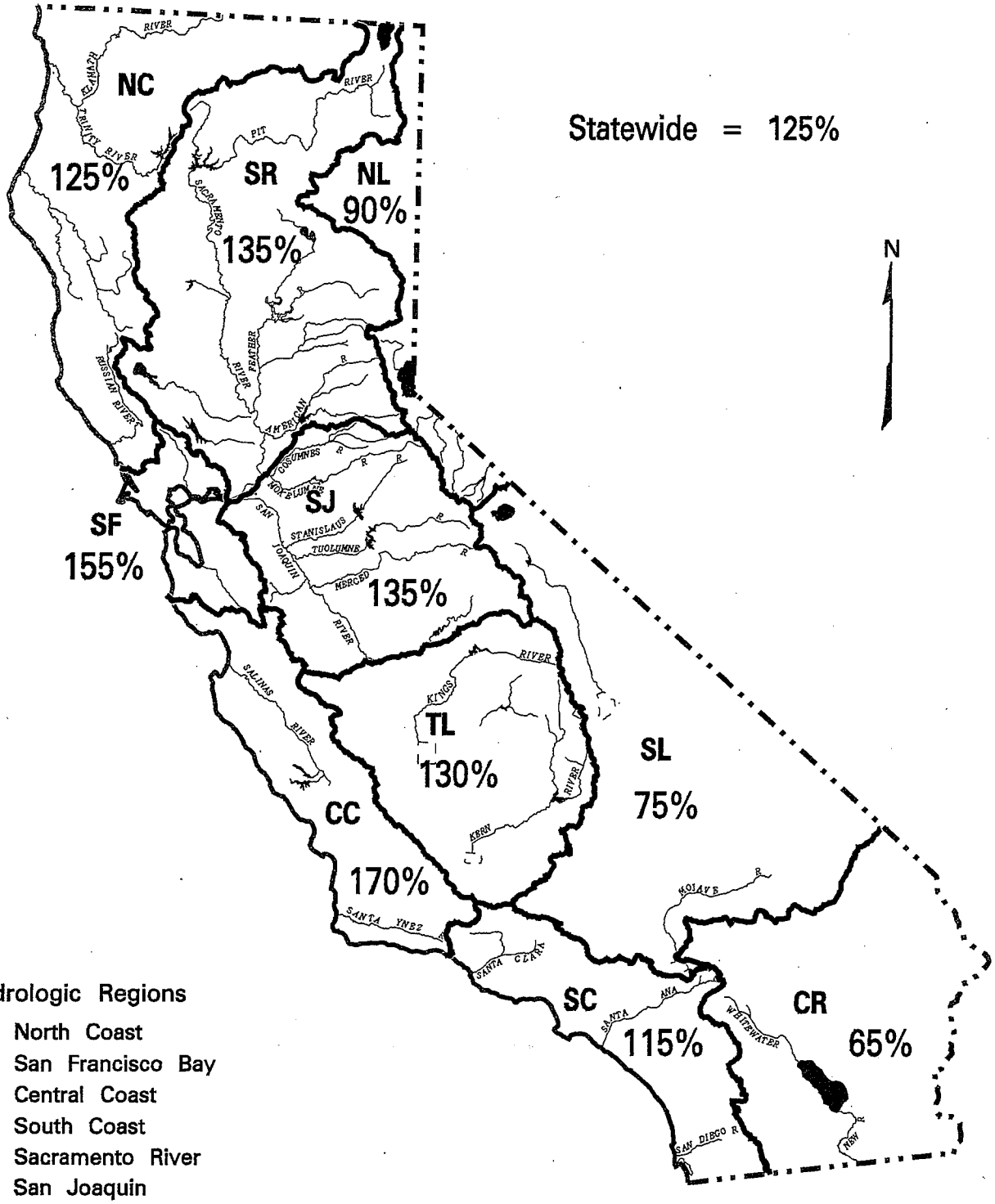
SUMMARY OF WATER CONDITIONS
IN PERCENT OF AVERAGE

HYDROLOGIC REGION	PRECIPITATION OCTOBER 1 TO DATE	MAY 1 SNOW WATER CONTENT	MAY 1 RESERVOIR STORAGE	RUNOFF OCTOBER 1 TO DATE	APR-JULY RUNOFF FORECAST	WATER YEAR RUNOFF FORECAST
NORTH COAST	145	250	105	155	190	170
SAN FRANCISCO BAY	180	--	125	200	--	--
CENTRAL COAST	220	--	135	230	--	--
SOUTH COAST	195	--	135	170	--	--
SACRAMENTO RIVER	150	170	105	160	145	160
SAN JOAQUIN RIVER	165	200	115	150	165	160
TULARE LAKE	175	225	145	155	190	180
NORTH LAHONTAN	115	160	140	110	140	135
SOUTH LAHONTAN	170	200	95	115	160	140
COLORADO RIVER-DESERT	170	---	---	---	---	---
STATEWIDE	160	190	115	155	165	160

SEASONAL PRECIPITATION

IN PERCENT OF AVERAGE TO DATE

October 1, 1997 through April 30, 1998



Hydrologic Regions

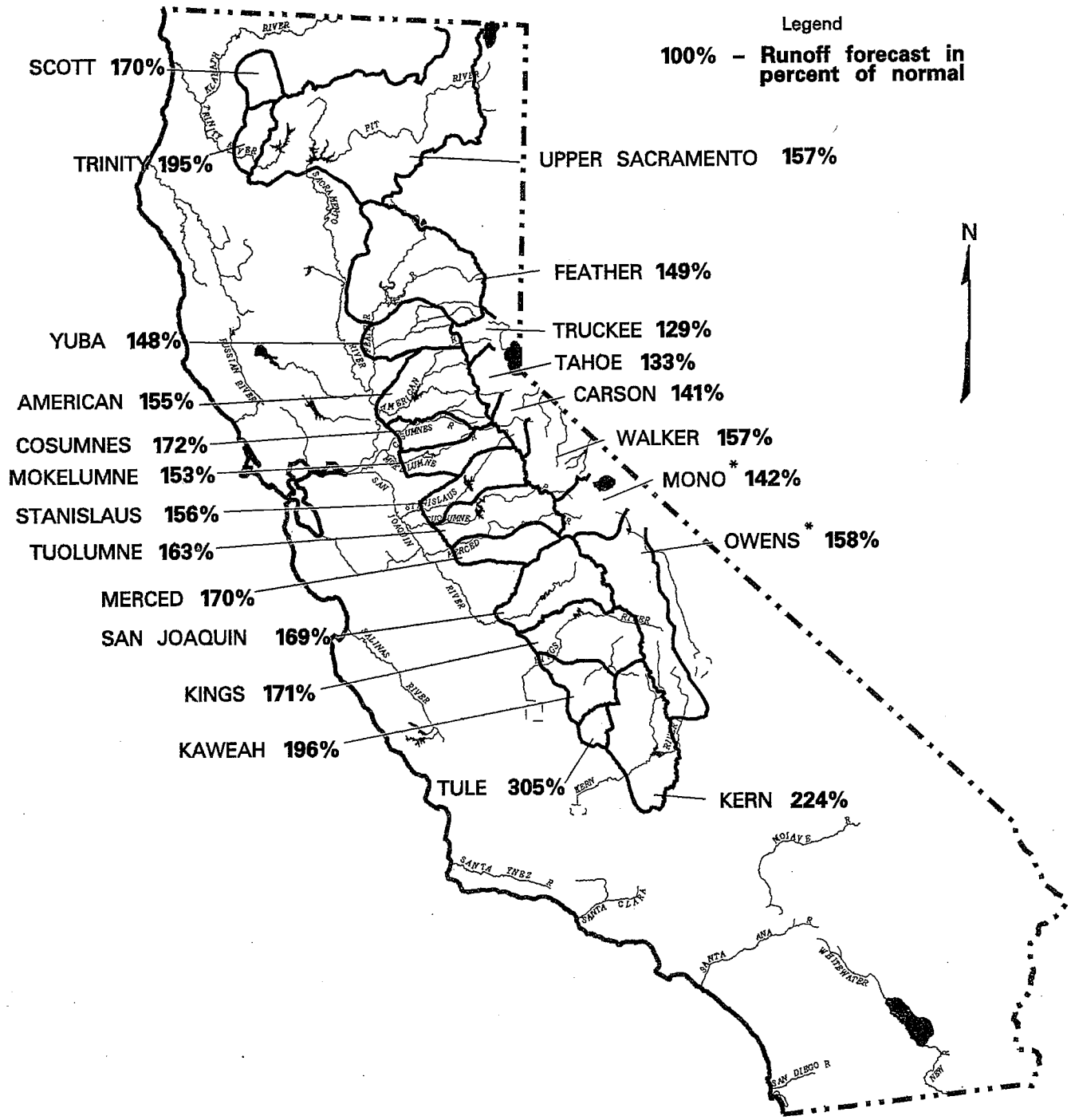
NC – North Coast
SF – San Francisco Bay
CC – Central Coast
SC – South Coast
SR – Sacramento River
SJ – San Joaquin
TL – Tulare Lake
NL – North Lahontan
SL – South Lahontan
CR – Colorado River–Desert

WATER YEAR IS OCTOBER 1 THROUGH SEPTEMBER 30

FORECAST OF APRIL – JULY

UNIMPAIRED SNOWMELT RUNOFF

May 1, 1998



* FORECAST BY DEPARTMENT OF WATER AND POWER, CITY OF LOS ANGELES

FEBRUARY 1, 1998 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1)					
	HISTORICAL			FORECASTS		
	50 Yr Avg (2)	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range (1)
SACRAMENTO RIVER						
Upper Sacramento River						
Sacramento River at Shasta Lake (3)	297	702	39	300	101%	
McCloud River at Shasta Lake	392	850	185	410	105%	
Pit River at Shasta Lake	1,056	1,796	480	1,130	107%	
Total Inflow to Shasta Lake	1,801	3,189	726	**1,950**	108%	1,310 - 2,850
Sacramento River above Bend Bridge, near Red Bluff	2,451	4,674	943	**2,580**	105%	1,730 - 3,770
Feather River						
Feather River at Lake Almanor near Prattville (3)	333	675	120	340	102%	
North Fork at Pulga (3)	1,028	2,416	243	1,050	102%	
Middle Fork near Clio (4)	86	518	4	90	105%	
South Fork at Ponderosa Dam (3)	110	267	13	110	100%	
Total Inflow to Oroville Reservoir	1,831	4,676	392	**1,880**	103%	1,270 - 2,940
Yuba River						
North Yuba below Goodyears Bar (3)	286	647	51	290	101%	
Inflow to Jackson Mdws and Bowman Reservoirs (3)	112	236	25	120	107%	
South Yuba at Langs Crossing (3)	233	481	57	240	103%	
Yuba River at Smartville	1,029	2,424	200	**1,070**	104%	710 - 1,730
American River						
North Fork at North Fork Dam (3)	262	716	43	270	103%	
Middle Fork near Auburn (3)	522	1,406	100	540	103%	
Silver Creek Below Camino Diversion Dam (3)	173	386	37	180	104%	
Total Inflow to Folsom Reservoir	1,261	3,074	229	**1,300**	103%	800 - 2,200
SAN JOAQUIN RIVER						
Cosumnes River at Michigan Bar	128	363	8	**120**	94%	60 - 230
Mokelumne River						
North Fork near West Point (5)	437	829	104	430	98%	
Total Inflow to Pardee Reservoir	459	1,065	102	**460**	100%	310 - 700
Stanislaus River						
Middle Fork below Beardsley Dam (3)	334	702	64	340	102%	
North Fork Inflow to McKays Point Dam (3)	224	503	34	230	103%	
Total Inflow to New Melones Reservoir	699	1,710	116	**710**	102%	480 - 1,100
Tuolumne River						
Cherry Creek & Eleanor Creek near Hetch Hetchy (3)	322	727	97	320	99%	
Tuolumme River near Hetch Hetchy (3)	606	1,392	153	610	101%	
Total Inflow to Don Pedro Reservoir	1,184	2,682	301	**1,210**	102%	860 - 1,750
Merced River						
Merced River at Pohono Bridge (3)	362	888	80	370	102%	
Total Inflow to Lake McClure	611	1,587	123	**620**	101%	440 - 910
San Joaquin River						
San Joaquin River at Mammoth Pool (6)	1,014	2,279	235	980	97%	
Big Creek below Huntington Lake (6)	95	264	11	90	95%	
South Fork near Florence Lake (6)	202	511	58	200	99%	
Total Inflow to Millerton Lake	1,212	3,355	262	**1,200**	99%	800 - 1,820
TULARE LAKE						
Kings River						
North Fork Kings River near Cliff Camp (3)	239	565	50	230	96%	
Total Inflow to Pine Flat Reservoir	1,183	3,114	273	**1,140**	96%	700 - 1,720
Kaweah River at Terminus Reservoir	276	814	61	**260**	94%	150 - 410
Tule River at Success Reservoir	59	256	2	**55**	93%	30 - 100
Kern River						
Kern River near Kernville (3)	373	1,203	83	370	99%	
Total Inflow to Isabella Reservoir	442	1,657	84	**440**	100%	260 - 780

(1) See inside back cover for definition
(2) All 50 year averages are based on years 1946-1995 unless otherwise noted
(3) 50 year average based on years 1941-90
(4) 44 year average based on years 1936-79
(5) 36 year average based on years 1936-72
(6) 45 year average based on years 1936-81

MAY 1, 1998 FORECASTS
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet (1)														
HISTORICAL			DISTRIBUTION								FORECASTS			
50 Yr Avg (2)	Max of Record	Min of Record	Oct Thru Jan*	Feb *	Mar *	Apr *	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80 % Probability Range (1)	
856	1,964	165												
1,184	2,353	577												
3,078	5,150	1,484												
5,896	10,796	2,479	2,710	2,140	1,305	995	890	595	340	525	**9,500**	161%	9,200	- 9,900
8,518	17,180	3,294	4,280	3,960	2,100	1,540	1,180	710	430	660	**14,860**	174%	14,460	- 15,430
780	1,269	366												
2,417	4,400	666												
219	637	24												
291	562	32												
4,526	9,492	994	1,495	1,115	980	885	1,000	600	235	240	**6,550**	145%	6,290	- 6,930
564	1,056	102												
181	292	30												
379	565	98												
2,337	4,926	369	685	645	520	500	570	360	90	60	**3,430**	147%	3,330	- 3,600
616	1,234	66												
1,070	2,575	144												
318	705	59												
2,674	6,381	349	690	730	590	585	760	485	130	50	**4,020**	150%	3,900	- 4,220
378	1,253	20	120	215	145	120	70	25	5	5	**705**	187%	670	- 740
626	1,009	197												
736	1,800	129	105	135	150	160	270	220	50	10	**1,100**	149%	1,040	- 1,180
471	929	88												
1,131	2,952	155	200	250	230	245	410	335	100	30	**1,800**	159%	1,720	- 1,910
461	1,147	123												
770	1,661	258												
1,857	4,430	383	265	355	355	350	660	660	260	75	**2,980**	160%	2,860	- 3,170
461	1,020	92												
952	2,859	150	130	255	165	200	370	350	120	40	**1,630**	171%	1,570	- 1,730
1,337	2,964	308												
112	298	14												
248	653	71												
1,753	4,642	362	180	210	230	290	680	690	390	150	**2,820**	161%	2,690	- 2,990
284	607	58												
1,647	4,294	383	165	175	185	250	670	730	370	135	**2,680**	163%	2,550	- 2,830
431	1,402	92	55	80	80	115	190	175	60	25	**780**	181%	740	- 820
135	615	16	40	80	65	85	60	30	10	10	**380**	281%	360	- 400
558	1,577	163												
694	2,309	175	110	100	130	165	330	320	175	100	**1,430**	206%	1,380	- 1,520

* Indicates observed runoff

FEBRUARY 1, 1998 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

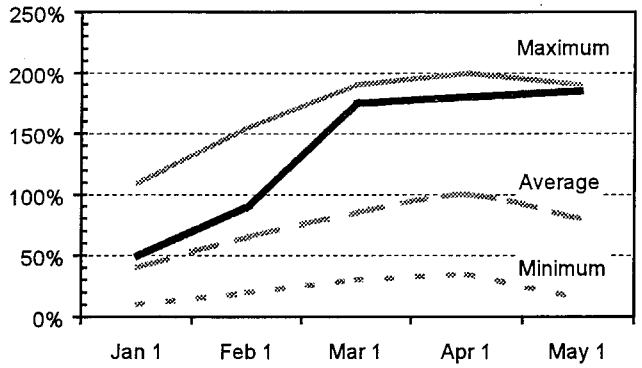
HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1)				
	HISTORICAL			FORECASTS	
	50 Yr Avg (2)	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg
NORTH COAST					
Trinity River					
Total Inflow to Lewiston Lake	642	1,593	80	**720**	112%
Scott River					
Near Fort Jones	200	N/A	N/A	**230**	115%
Klamath River					
Total inflow to Upper Klamath Lake (3)	509	758	280	**520**	102%
NORTH LAHONTAN					
Truckee River					
Lake Tahoe to Farad accretions	264	713	58	**220**	83%
Lake Tahoe Rise (assuming gates closed, in feet) (4)	1.5	3.8	0.2	**1.2**	78%
Carson River					
West Fork at Woodfords	54	135	12	**50**	93%
East Fork near Gardnerville	183	407	43	**180**	98%
Walker River					
West Fork near Coleville	143	330	35	**140**	98%
East Fork near Bridgeport	61	209	7	**60**	98%
SOUTH LAHONTAN					
Owens River					
Total tributary flow to Owens River (5)	226	579	96	**n/a**	

(1) See inside back cover for definition
(2) All 50 year averages are based on years 1946-1995 unless otherwise noted
(3) Forecast by U.S. Natural Resources Conservation Service, Portland Oregon, 30 year average based on years 1961-1990. April through September forecast.
(4) 50 year average based on years 1941-1990
(5) Forecast by Department of Water and Power, City of Los Angeles

NORTH COAST REGION

Snowpack Accumulation

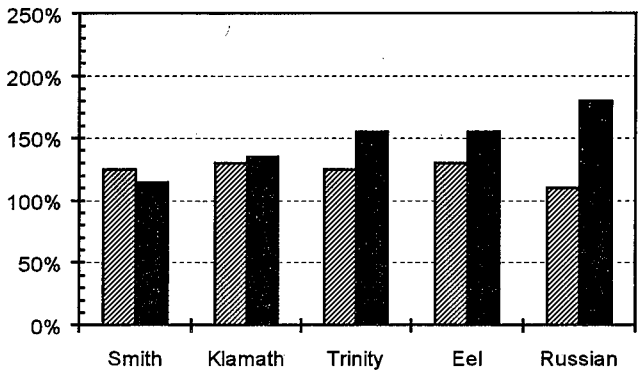
Water Content in % of April 1 average



SNOWPACK - First of the month measurements made at 10 snow courses indicate an area wide snow water equivalent of 62.1 inches. This is 185 percent of the April1 average and 250 percent of the May 1 average. Last year at this time the pack was holding 7.2 inches of water.

Precipitation

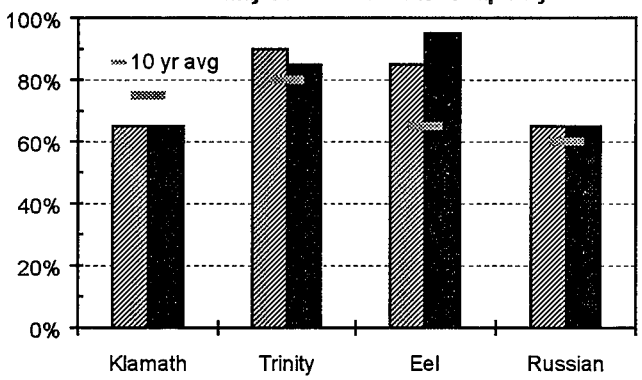
October 1 to date in % of average



PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on this area was 145 percent of normal. Precipitation last month was about 95 percent of the monthly average. Seasonal precipitation at this time last year stood at 125 percent of normal.

Reservoir Storage

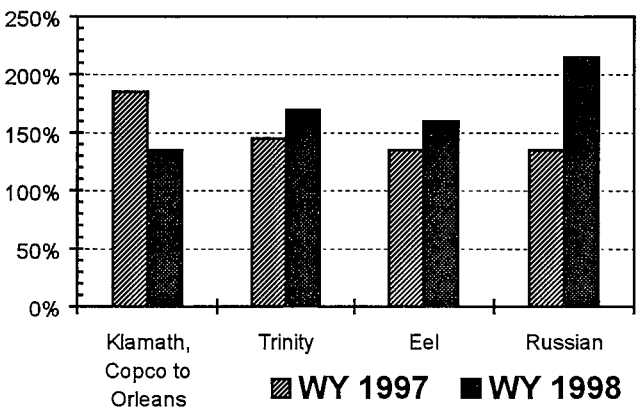
Contents of major reservoirs in % of capacity



RESERVOIR STORAGE - First of the month storage in 7 reservoirs was 2.6 million acre-feet which is 105 percent of average. About 85 percent of available capacity was being used. Storage in these reservoirs at this time last year was 105 percent of average.

Runoff

October 1 to date in % of average

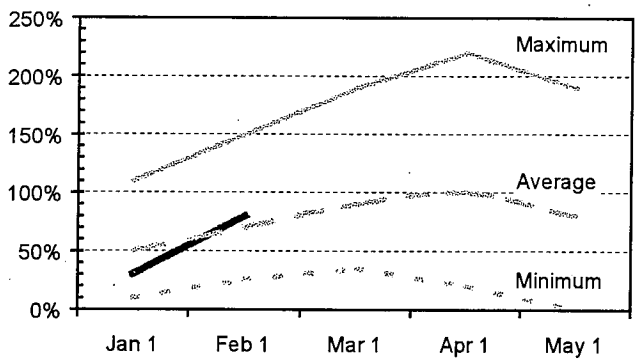


RUNOFF - Seasonal runoff of streams draining the area totaled 17.5 million acre-feet which is 155 percent of average for this period. Last year, runoff for the same period was 155 percent of average.

SACRAMENTO RIVER REGION

Snowpack Accumulation

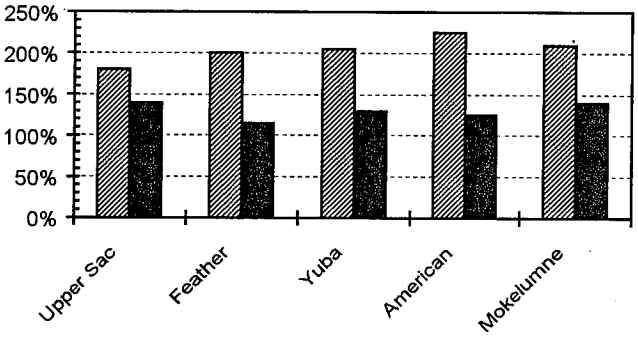
Water Content in % of April 1 average



SNOWPACK - First of the month measurements made at 70 snow courses indicate an area wide snow water equivalent of 24.4 inches. This is 120 percent of the February 1 average and 80 percent of the seasonal (April 1) average. Last year at this time the pack was holding 23.1 inches of water.

Precipitation

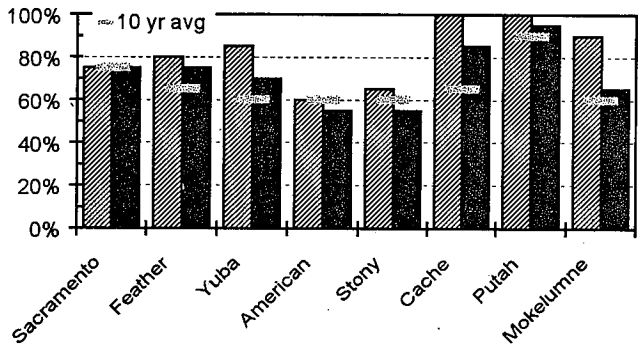
October 1 to date in % of average



PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on this area was 135 percent of normal. Precipitation last month was about 185 percent of the monthly average. Seasonal precipitation at this time last year stood at 195 percent of normal.

Reservoir Storage

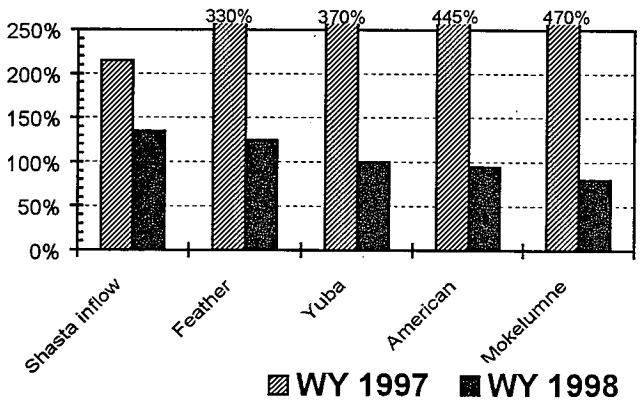
Contents of major reservoirs in % of capacity



RESERVOIR STORAGE - First of the month storage in 43 reservoirs was 11.9 million acre-feet which is 110 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 120 percent of average.

Runoff

October 1 to date in % of average



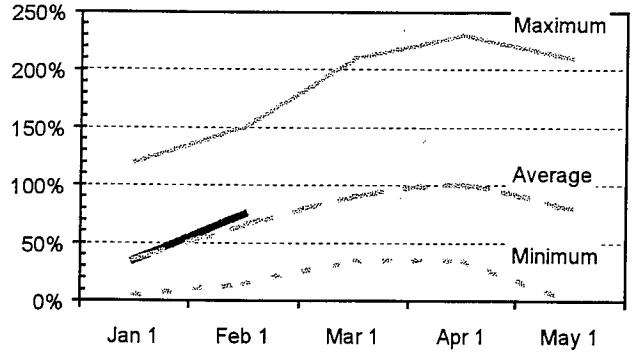
RUNOFF - Seasonal runoff of streams draining the area totaled 7.3 million acre-feet which is 125 percent of average for this period. Last year, runoff for the same period was 280 percent of average.

The Sacramento River Region 40-30-30 Water Supply Index is forecast to be 9.6 assuming median meteorological conditions for the remainder of the year. This classifies the year as "wet" in the Sacramento Valley according to the State Water Resources Control Board.

SAN JOAQUIN RIVER and TULARE LAKE REGIONS

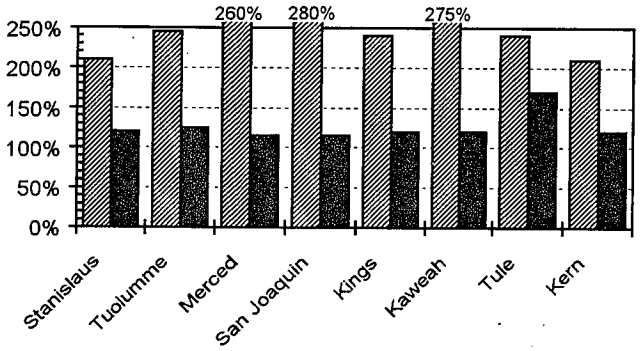
Snowpack Accumulation

Water Content in % of April 1 average



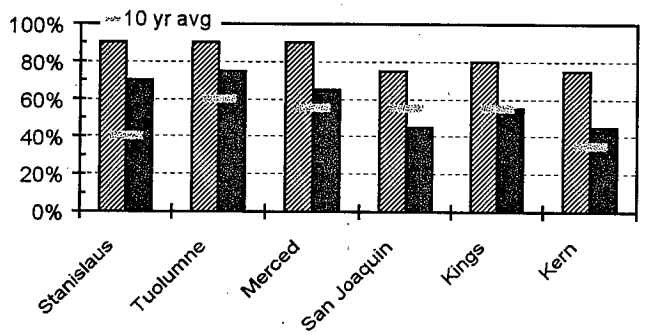
Precipitation

October 1 to date in % of average



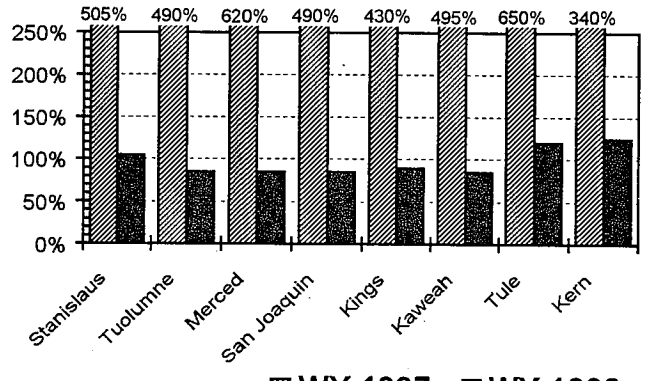
Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average



SNOWPACK - First of the month measurements made at 51 **San Joaquin Region** snow courses indicate an area wide snow water equivalent of 22.1 inches. This is 110 percent of the February 1 average and 70 percent of the seasonal (April 1) average. Last year at this time the pack was holding 40.0 inches of water. At the same time, 36 **Tulare Lake Region** snow courses indicated a basin-wide snow water equivalent of 17.1 inches which is 145 percent of the average for February 1 and 90 percent of the seasonal average. Last year at this time the basin was holding 26.8 inches of water.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the **San Joaquin Region** was 135 percent of normal. Precipitation last month was about 210 percent of the monthly average. Seasonal precipitation at this time last year stood at 235 percent of normal. Seasonal precipitation on the **Tulare Lake Region** was 135 percent of normal. Precipitation last month was 165 percent of the monthly average. Seasonal precipitation at this time last year stood at 240 percent of normal.

RESERVOIR STORAGE - First of the month storage in 33 **San Joaquin Region** reservoirs was 8.0 million acre-feet which is 126 percent of average and about 70 percent of available capacity. Storage in these reservoirs at this time last year was 155 percent of average. First of the month storage in 6 **Tulare Lake Region** reservoirs was 935 thousand acre-feet which is 125 percent of average and about 45 percent of available capacity. Storage in these reservoirs at this time last year was 220 percent of average.

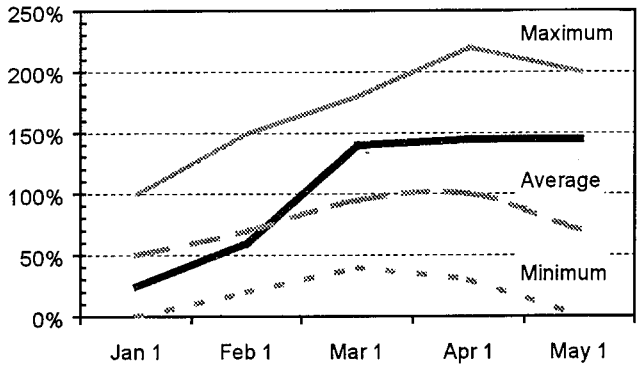
RUNOFF - Seasonal runoff of streams draining the **San Joaquin Region** totaled 1.0 million acre-feet which is 90 percent of average for this period. Last year, runoff for the same period was 510 percent of average.

Stream runoff draining into the **Tulare Lake Basin** totaled 380 thousand acre-feet which is 95 percent of average for this period. Last year, runoff for the same period was 430 percent of average.

The San Joaquin River Region **60-20-20 Water Supply Index** is forecasted to be 3.4 assuming median meteorological conditions for the remainder of the year. This classifies the year as "above normal" in the San Joaquin Valley according to the State Water Resources Control Board.

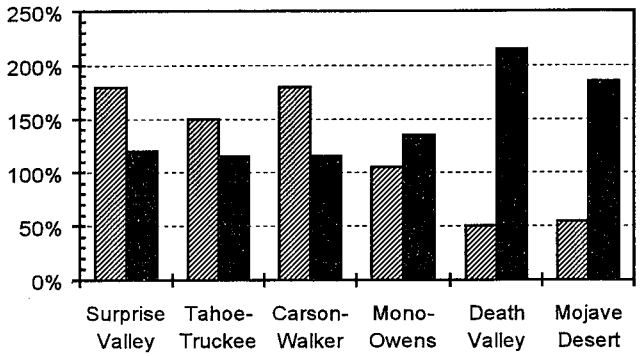
Snowpack Accumulation

Water Content in % of April 1 average



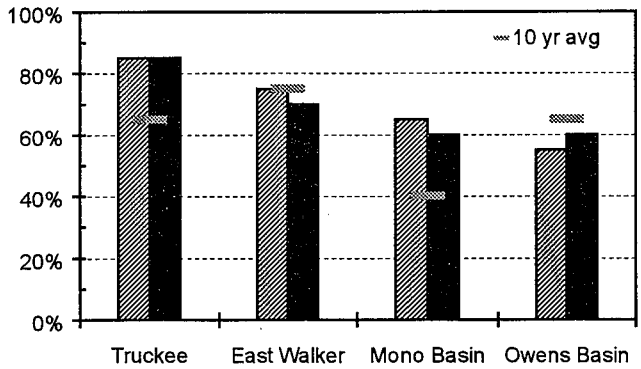
Precipitation

October 1 to date in % of average



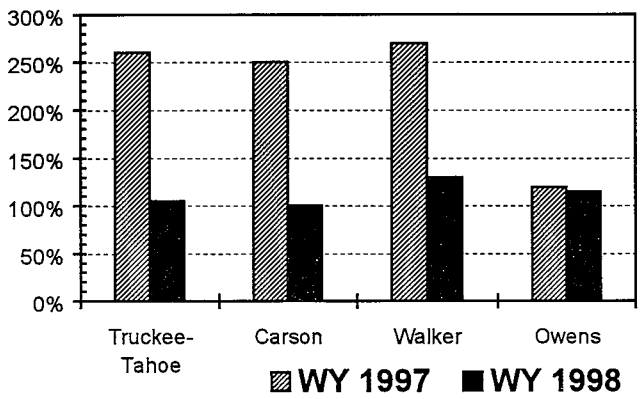
Reservoir Storage

Contents of major reservoirs in % of capacity



Runoff

October 1 to date in % of average



NORTH and SOUTH LAHONTAN REGIONS

SNOWPACK - First of the month measurements made at 3 **North Lahontan** snow courses indicate an area wide snow water equivalent of 28.9 inches. This is 125 percent of the April 1 average and 160 percent of average for this month. Last year at this time the pack was holding 25.4 inches of water.

At the same time, 5 **South Lahontan** snow courses indicated a basin-wide snow water equivalent of 30.4 inches, which is 160 percent of the April 1 average and 200 percent of average for this month. Last year at this time the pack was holding 20.0 inches of water.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the **North Lahontan** Region was 115 percent of normal. Precipitation last month was about 55 percent of the monthly average. Seasonal precipitation at this time last year stood at 170 percent of normal.

Seasonal precipitation on the **South Lahontan** Region was 170 percent of normal. Precipitation last month was 130 percent of the monthly average. Seasonal precipitation at this time last year stood at 65 percent of normal.

RESERVOIR STORAGE - First of the month storage in 5 **North Lahontan** Region reservoirs was 910 thousand acre-feet which is 140 percent of average. About 85 percent of available capacity was being used. Storage in these reservoirs at this time last year was 140 percent of average. Lake Tahoe was 5.1 feet above its natural rim on May 1.

First of the month storage in 8 **South Lahontan** Region reservoirs was 260 thousand acre-feet which is 95 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 90 percent of average.

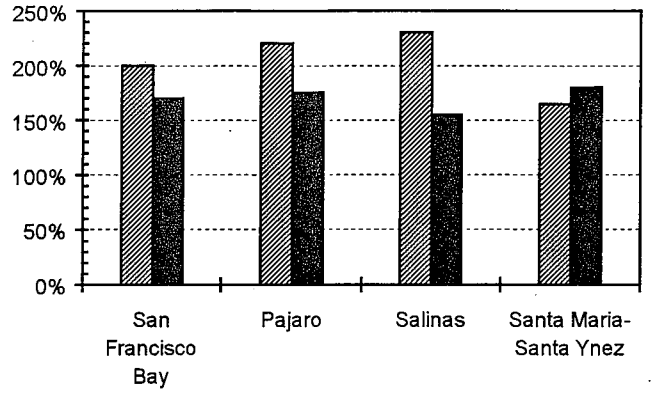
RUNOFF - Seasonal runoff of streams draining the **North Lahontan** area totaled 460 thousand acre-feet which is 110 percent of average for this period. Last year, runoff for the same period was 260 percent of average.

Seasonal runoff of the Owens River in the **South Lahontan** Region totaled 92 thousand acre-feet which is 115 percent of average for this period. Last year, runoff for this same period was 120 percent of average.

SAN FRANCISCO BAY and CENTRAL COAST REGIONS

Precipitation

October 1 to date in % of average

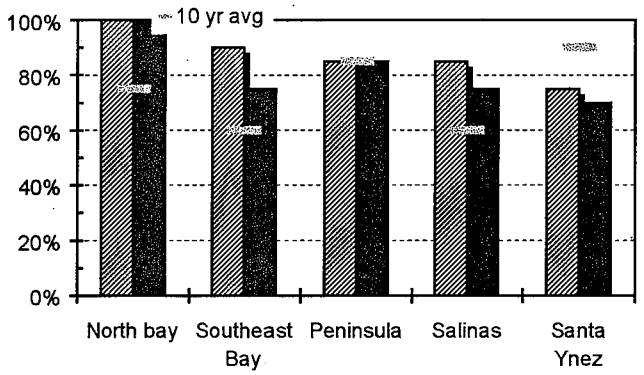


PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Francisco Bay area was 155 percent of normal. Precipitation last month was about 200 percent of the monthly average. Seasonal precipitation at this time last year stood at 200 percent of normal.

Seasonal precipitation on the Central Coast area was 170 percent of normal. Precipitation last month was about 170 percent of the monthly average. Seasonal precipitation at this time last year stood at 205 percent of normal.

Reservoir Storage

Contents of major reservoirs in % of capacity

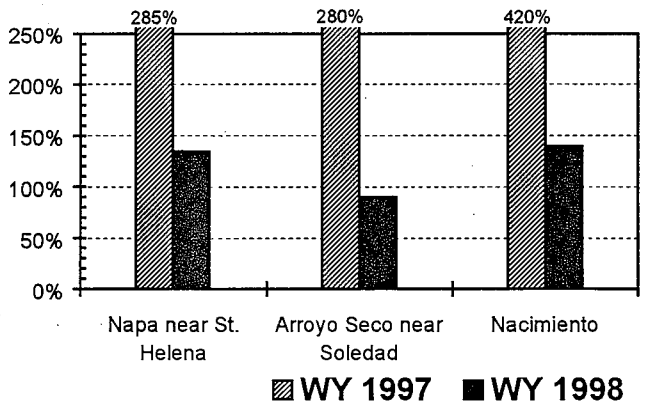


RESERVOIR STORAGE - First of the month storage in 18 major Bay area reservoirs was 562 thousand acre-feet which is 125 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 140 percent of average.

First of the month storage in 6 major Central Coast reservoirs was 701 thousand acre-feet which is 125 percent of average. About 75 percent of available capacity was being used. Storage in these reservoirs at this time last year was 140 percent of average.

Runoff

October 1 to date in % of average



RUNOFF - Seasonal runoff of the Napa River in the San Francisco Bay area totaled 44 thousand acre-feet which is 135 percent of average for this period. Last year, runoff for the same period was 280 percent of average.

Seasonal runoff of selected Central Coast streams totaled 158 thousand acre-feet which is 120 percent of average for this period. Last year, runoff for the same period was 370 percent of average.

SOUTH COAST

PRECIPITATION - October through March (seasonal) precipitation on the South Coast area was 195 percent of normal. April precipitation was about 140 percent of the monthly average. Seasonal precipitation at this time last year was 85 percent of normal. Seasonal precipitation in the Colorado Desert area was 170 percent of normal. Precipitation in April was 10 percent of average. Seasonal precipitation at this time last year stood at 60 percent of average.

RESERVOIR STORAGE - May 1 storage in 29 major South Coast area reservoirs was 1.8 million acre-feet or 135 percent of average. About 90 percent of available capacity was being used. Storage in these reservoirs at this time last year was 115 percent of average.
On May 1 combined storage in Lakes Powell, Mead, Mohave and Havasu was about 48 million acre-feet or 130 percent of average. About 90 percent of available capacity was in use. Last year at this time, these reservoirs were storing 120 percent of average.

RUNOFF - Seasonal runoff from selected South Coast streams totaled 77 thousand acre-feet which is 170 percent of average. Seasonal runoff from these streams last year was 80 percent of average.

COLORADO RIVER

The May 1 snowpack in the Upper Colorado River basin according to U. S. Natural Resources Conservation Service reports was 94 percent of average, highest in the Gunnison at 115 percent and lowest in the Upper Colorado at 84 percent. The April through July inflow to Lake Powell is forecast to be 7.4 million acre-feet, which is 96 percent of average.

CENTRAL VALLEY PROJECT

Based on May 1 conditions, Bureau of Reclamation Water Year forecasts for unimpaired runoff to CVP reservoirs are: Trinity--2.53 MAF (209% of average), Shasta--9.42 MAF (169% of average), American--4.04 MAF (153% of average), Stanislaus--1.96 MAF (171% of average), and San Joaquin above Friant--2.83 MAF 159% of average). April-July forecasts for unimpaired runoff are: Trinity--1.23 MAF (204% of average), Shasta--2.77 MAF (159% of average), American--1.97 MAF (154% of average), Stanislaus--1.23 MAF (167% of average), and San Joaquin above Friant--2.04 MAF (160% of average).

As of April 30, 1998 CVP storage was 9.9 million acre feet which is an increase of 0.4 million acre feet compared to one year ago, and is approximately 117% of normal for that date.

The Bureau of Reclamation announced updated water allocations for the CVP on April 15, 1998. Agricultural contractors north of the Delta are allocated 100% of their contract supply, agricultural contractors south of the Delta had their allocation increased to 100% of their contract supply. Urban contractors received 100% of contractual supply. Wildlife refuges received 100% of level II supplies. Sacramento River water rights settlement contractors and San Joaquin Exchange contractors remain at 100% supplies.

Friant Division allocations are currently at 100% Class I, with a sliding scale allocation for Class II supplies, beginning at 100%, and declining depending on timing of scheduled deliveries. Stanislaus River contractors received an allocation of 50,000 acre feet.

STATE WATER PROJECT

Due to continued wet conditions, the SWP announced on March 13 that 100% of contractor requests (3.19 MAF) for the year would be supplied. SWP delivery approvals are based on the amount of water presently stored in SWP reservoirs, a conservative projection of runoff for the remainder of 1998, contractor requests and SWP operation constraints.
It is expected that Oroville Reservoir will fill near the end of May or the first part of June. All other SWP reservoirs are currently full.

MAJOR WATER DISTRIBUTION PROJECTS

RESERVOIR STORAGE

(AVERAGES BASED ON PERIOD RECORD)

RESERVOIR	CAPACITY 1,000 AF	AVERAGE STORAGE 1,000 AF	STORAGE AT END OF JANUARY 1997 1,000 AF	1998 1,000 AF	PERCENT AVERAGE	PERCENT CAPACITY
STATE WATER PROJECT						
Lake Oroville	3,538	2,427	2,860	2,788	115%	79%
San Luis Reservoir (SWP)	1,062	833	1,102	1,068	128%	101%
Lake Del Valle	77	30	37	37	124%	48%
Lake Silverwood	73	64	12	70	110%	96%
Pyramid Lake	171	162	165	169	105%	99%
Castaic Lake	324	248	307	287	116%	89%
Perris Lake	132	110	124	108	98%	82%
CENTRAL VALLEY PROJECT						
Trinity	2,448	1,815	2,100	1,800	99%	74%
Lake Shasta	4,552	3,181	3,476	3,390	107%	74%
Whiskeytown Lake	241	208	206	206	99%	85%
Folsom Lake	977	534	376	542	102%	55%
New Melones Reservoir	2,420	1,401	2,243	1,925	137%	80%
Millerton Lake	520	305	455	320	105%	62%
San Luis Reservoir (CVP)	971	734	897	791	108%	81%
COLORADO RIVER PROJECT						
Lake Mead	26,159	19,864	22,288	25,068	126%	96%
Lake Powell	25,002	16,600	19,991	21,103	127%	84%
Lake Mohave	1,810	1,595	1,672	1,682	105%	93%
Lake Havasu	619	539	564	548	102%	88%
EAST BAY MUNICIPAL UTILITY DISTRICT						
Pardee Reservoir	198	176	191	166	94%	84%
Camanche Reservoir	417	241	360	321	133%	77%
East Bay (4 reservoirs)	151	122	136	143	117%	95%
CITY AND COUNTY OF SAN FRANCISCO						
Hetch-Hetchy Reservoir	360	144	291	196	136%	54%
Cherry Lake	268	103	243	168	162%	63%
Lake Eleanor	26	9	25	11	127%	42%
South Bay/Peninsula (4 reservoirs)	225	157	210	191	122%	85%
CITY OF LOS ANGELES (D.W.P.)						
Lake Crowley	183	129	127	115	90%	63%
Grant Lake	~~48~~ 47	28	47	42	148%	87%
Other Aqueduct Storage (6 res.)	83	71	67	58	82%	70%

TELEMETERED SNOW WATER EQUIVALENTS

MAY 1, 1998

(AVERAGES BASED ON PERIOD RECORD)

BASIN NAME / STATION NAME	ELEV	APRIL 1 AVERAGE	INCHES OF WATER EQUIVALENT MAY 1	PERCENT OF AVERAGE	24 HRS PREVIOUS	1 WEEK PREVIOUS
TRINITY RIVER						
Peterson Flat	7150'	29.2	42.7	146%	43.9	46.0
Red Rock Mountain	6700'	39.6	69.9	177%	70.5	74.5
Bonanza King	6450'	40.5	80.0	198%	81.0	84.0
Shimmy Lake	6200'	40.3	—	—	—	—
Middle Boulder 3	6200'	28.3	—	—	—	—
Highland Lakes	6030'	29.9	71.0	237%	72.0	75.2
Scott Mountain	5900'	16.0	30.7	192%	32.9	37.1
Mumbo Basin	5700'	22.4	47.2	211%	48.7	54.7
Big Flat	5100'	15.8	28.2	178%	29.2	33.4
SACRAMENTO RIVER						
Cedar Pass	7100'	18.1	20.9	115%	21.9	26.3
Blacks Mountain	7100'	12.7	12.0	94%	13.0	16.2
Sand Flat	6750'	42.4	67.9	160%	69.1	72.0
Medicine Lake	6700'	32.6	—	—	—	—
Adin Mountain	6350'	13.6	14.2	104%	15.6	20.3
Snow Mountain	5950'	27.0	44.7	166%	45.9	50.8
Slate Creek	5600'	29.0	86.4	298%	88.4	90.2
Stouts Meadow	5400'	36.0	61.0	169%	62.3	66.2
FEATHER RIVER						
Kettle Rock	7300'	25.5	43.3	170%	44.0	46.8
Grizzly Ridge	6900'	29.7	35.9	121%	37.0	39.6
Pilot Peak (DWR)	6800'	52.6	73.8	140%	75.2	78.7
Gold Lake	6750'	36.5	54.7	150%	55.3	57.5
Humbug	6500'	28.0	63.7	228%	64.9	67.9
Rattlesnake	6100'	14.0	22.6	161%	23.5	28.0
Bucks Lake	5750'	44.7	65.3	146%	66.0	69.1
Four Trees	5150'	20.0	41.9	209%	43.2	48.6
EEL RIVER						
Noel Spring	5100'	—	0.0	—	0.9	9.5
Plaskett Meadows	6000'	—	—	—	—	—
YUBA & AMERICAN RIVERS						
Lake Lois	8800'	39.5	—	—	—	—
Schneiders	8750'	34.5	57.0	165%	57.6	60.0
Caples Lake (DWR)	7800'	30.9	43.2	140%	44.2	47.5
Alpha (Smud)	7600'	35.9	53.1	148%	53.9	57.4
Beta	7600'	35.9	49.2	137%	50.0	53.8
Meadow Lake	7200'	55.5	77.7	140%	78.4	80.3
Silver Lake (DWR)	7100'	22.7	38.0	167%	39.0	43.0
Central Sierra Snow Lab	6950'	33.6	41.3	123%	42.9	47.8
Huysink	6600'	42.6	52.4	123%	54.5	56.3
Van Vleck	6700'	35.9	44.5	124%	45.4	50.8
Robbs Saddle	5900'	21.4	30.5	142%	31.9	38.6
Greek Store	5600'	21.0	29.9	142%	31.1	35.0
Blue Canyon	5280'	9.0	0.0	0%	0.0	7.1
Robbs Powerhouse	5150'	5.2	0.6	11%	2.0	8.4
MOKELUMNE & STANISLAUS RIVERS						
Deadman Creek	9250'	37.2	43.0	115%	43.1	48.1
Highland Meadow	8800'	47.9	61.6	129%	61.7	63.3
Gianelli Meadow	8350'	55.5	70.0	126%	70.9	72.6
Lower Relief Valley	8100'	41.2	59.2	144%	60.6	62.5
Blue Lakes	8000'	33.1	40.7	123%	41.1	42.7
Mud Lake	7900'	44.9	81.0	180%	81.3	82.6
Stanislaus Meadow	7750'	47.5	66.5	140%	67.2	68.6
Bloods Creek	7200'	35.5	34.5	97%	35.5	39.6
Black Springs	6500'	32.0	40.1	125%	42.7	45.2
TUOLUMNE & MERCED RIVERS						
Dana Meadows	9800'	27.7	36.6	132%	36.6	40.5
Slide Canyon	9200'	41.1	51.0	124%	51.6	54.3
Snow Flat	8700'	44.1	—	—	—	—
Tuolumne Meadows	8600'	22.6	29.2	129%	30.1	33.7
Horse Meadow	8400'	48.6	58.9	121%	59.5	63.5
Ostrander Lake	8200'	34.8	49.4	142%	50.0	54.5
Paradise Meadow	7650'	41.3	—	—	—	—
Gin Flat	7050'	34.2	38.5	113%	39.5	43.7
Lower Kibbie Ridge	6600'	27.4	35.8	131%	36.5	40.4

TELEMETERED SNOW WATER EQUIVALENTS

FEBRUARY 1, 1998

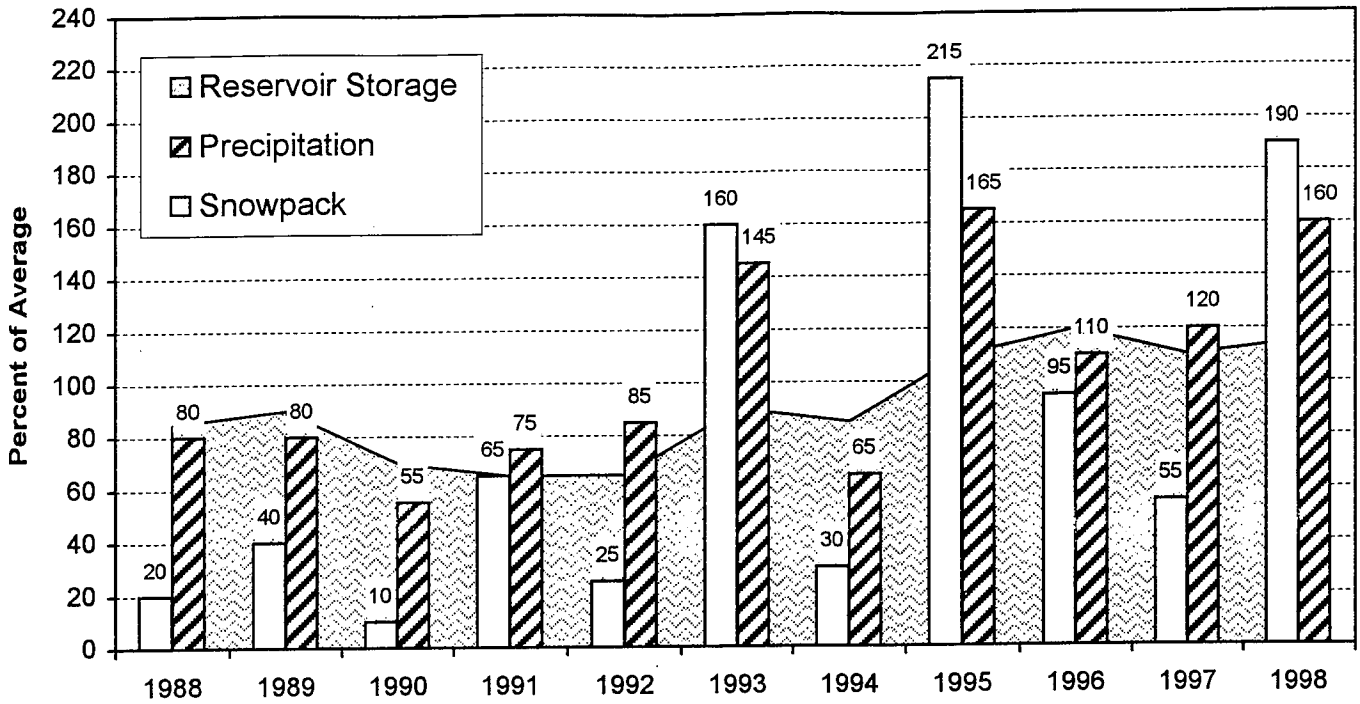
(AVERAGES BASED ON PERIOD RECORD)

BASIN NAME / STATION NAME	ELEV	APRIL 1 AVERAGE	INCHES OF WATER EQUIVALENT FEB 1	PERCENT OF AVERAGE	24 HRS PREVIOUS	1 WEEK PREVIOUS
SAN JOAQUIN RIVER						
Volcanic Knob	10100'	30.1	17.6	59%	17.6	17.0
Agnew Pass	9450'	32.3	—	—	—	—
Kaiser Point	9200'	37.8	19.1	51%	19.1	17.7
Green Mountain	7900'	30.8	17.3	56%	17.3	16.3
Tamarack Summit	7600'	30.5	17.1	56%	17.1	15.9
Chilkoot Meadow	7150'	38.0	11.6	31%	11.6	10.2
Huntington Lake (USBR)	7000'	20.1	14.4	71%	14.2	12.6
Graveyard Meadow	6900'	18.8	12.0	64%	12.0	11.0
Poison Ridge	6900'	28.9	—	—	—	—
KINGS RIVER						
Bishop Pass	11200'	34.0	18.0	53%	18.7	17.4
Charlotte Lake	10400'	27.5	16.0	58%	15.8	14.8
State Lakes	10400'	29.0	24.2	83%	24.2	22.1
Mitchell Meadow	10375'	32.9	23.2	71%	23.2	21.4
Blackcap Basin	10300'	34.3	22.2	65%	22.2	20.9
Upper Burnt Corral	9700'	34.6	26.1	76%	26.1	24.2
West Woodchuck Meadow	9100'	32.8	21.7	66%	21.6	19.8
Big Meadows (DWR)	7600'	25.9	16.1	62%	16.1	14.9
KAWEAH & TULE RIVERS						
Quaking Aspen	7200'	21.0	18.6	89%	18.6	17.4
Giant Forest (Corps)	6400'	10.0	9.7	97%	9.7	8.4
KERN RIVER						
Upper Tyndall Creek	11500'	27.7	18.5	67%	18.6	18.2
Crabtree Meadow	10700'	19.8	—	—	—	—
Chagoopa Plateau	10300'	21.8	13.5	62%	13.5	13.5
Pascoes	9150'	24.9	22.9	92%	22.7	20.9
Tunnel Guard Station	8950'	15.6	10.1	65%	10.1	9.4
Wet Meadows	8900'	30.3	18.7	62%	18.8	17.5
Casa Vieja Meadows	8400'	20.9	13.1	63%	12.4	11.8
Beach Meadows	7650'	11.0	9.4	86%	9.2	8.6
SURPRISE VALLEY AREA						
Dismal Swamp	7050'	29.2	24.2	83%	23.8	22.4
TRUCKEE RIVER						
Mount Rose Ski Area	8850'	38.5	20.4	53%	18.7	18.1
Independence Lake (NRCS)	8450'	41.4	27.1	65%	25.5	23.7
Big Meadows (NRCS)	8700'	25.7	12.1	47%	11.4	10.8
Independence Camp	7000'	21.8	13.7	63%	12.6	12.2
Independence Creek	6500'	12.7	11.1	87%	10.1	9.0
LAKE TAHOE BASIN						
Heavenly Valley	8800'	28.1	17.5	62%	16.4	16.0
Hagans Meadow	8000'	16.5	11.1	67%	10.6	10.0
Marlette Lake	8000'	21.1	14.8	70%	13.5	12.6
Echo Peak 5	7800'	39.5	27.0	68%	27.0	25.5
Rubicon Peak 2	7500'	29.1	17.9	62%	16.9	15.8
Ward Creek 3	6750'	39.4	23.2	59%	21.8	20.3
Fallen Leaf Lake	6300'	7.0	5.2	74%	4.5	4.2
CARSON RIVER						
Ebbetts Pass	8700'	38.8	22.3	57%	21.2	20.9
Poison Flat	7900'	16.2	10.4	64%	9.9	9.4
WALKER RIVER						
Virginia Lakes	9200'	20.3	9.1	45%	8.2	8.2
Lobdell Lake	9200'	17.3	8.7	50%	8.2	7.6
Sonora Pass Bridge	8750'	26.0	14.6	56%	13.9	12.7
Leavitt Meadows	7200'	8.0	8.4	105%	7.8	6.4
OWENS RIVER/MONO LAKE						
Gem Pass	10750'	31.7	18.3	58%	18.3	17.0
Sawmill	10300'	19.4	11.1	57%	11.1	11.1
Cottonwood Lakes	10200'	11.6	5.5	48%	5.5	5.5
Big Pine Creek	9800'	17.9	7.8	44%	7.8	7.8
South Lake	9600'	16.0	8.3	52%	8.3	8.0
Mammoth Pass (USBR)	9500'	42.4	21.8	52%	21.8	20.5
Rock Creek Lakes	10000'	14.0	7.9	57%	7.9	7.6

NORMAL SNOWPACK ACCUMULATION EXPRESSED AS A PERCENT OF APRIL 1ST AVERAGE

AREA	JANUARY	FEBRUARY	MARCH	APRIL	MAY
Central Valley North	45%	70%	90%	100%	75%
Central Valley South	45%	65%	85%	100%	80%
North Coast	40%	60%	85%	100%	80%

May 1 Statewide Conditions



❄❄❄ SNOWLINES❄❄❄

A baleful stare from a mule contemplating a trip into Horse Meadow is pictured on this month's cover. Horse Meadow, just north of Yosemite National Park is about a 20 mile trip. Damage to the pillows required replacement during the summer of 1996. Photo by Dave Hart, Department of Water Resources

CANBERRA INDUSTRIES has signed a development agreement to produce the passive cosmic gamma detectors. The additional second generation prototypes will be installed in California at Mammoth Mountain and a second site in the Central Sierra.

THE SOUTH PACIFIC region of the Western Snow Conference, which includes California, will be hosting the 1999 meeting to be held April 18-22 at the Embassy Suites Resort at South Lake Tahoe, CA. In the recently completed elections for the South Pacific region executive committee, Bruce McGurk was elected area Chair. His e-mail address is bjmo@pge.com. The new general chair is Chuck Troendle from Colorado. His e-mail address is ctroendle/rms@fs.fed.us.

SNOWPACK - Snow data is a major index of spring and summer runoff from Sierra Nevada watersheds. April 1 data historically reflects the magnitude of the snowpack at or near the maximum seasonal accumulation. Averages are based on April 1 data for the period 1946-1995 (50 years, except for data sites established after 1946).

PRECIPITATION - Averages are based on April 1 data for the period 1946-1995 (50 years, except for data sites established after 1946).

RUNOFF AND FORECASTS - Runoff data and runoff forecasts are shown as unimpaired values. Unimpaired runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds. Forecast of runoff assumes median conditions subsequent to the date of forecast.

Runoff probability ranges are statistically derived from historical data. The 80 percent probability range is comprised of the 90 percent exceedence level value and the 10 percent exceedence level value. This means that actual runoff should fall within the stated limits eight times out of ten.

Runoff averages for most streams are based on the period 1946-1995. For more details contact California Cooperative Snow Surveys, P.O. Box 942836, Sacramento, CA 94236-0001, (916) 574-2635 or gridley@water.ca.gov.

INDICES OF WATER AVAILABILITY

The Sacramento River Hydrologic Region 40-30-30 Water Supply Index. The *40-30-30* represent the percentage weight given to the three variables in the formula for the index. The first variable is the forecasted unimpaired runoff from April through July (*40 Percent*). The second variable is the forecasted unimpaired runoff from October through March (*30 Percent*). The third variable is the previous year's index with a cap to account for required flood control releases during wet years. The basins used in this computation are those used in the Sacramento River water year unimpaired runoff.

The Sacramento River water year unimpaired runoff is the sum of: Sacramento River above Bend Bridge, Feather River Inflow to Lake Oroville, Yuba River near Smartville and American River Inflow to Folsom Lake.

The San Joaquin River Hydrologic Region 60-20-20 Water Supply Index. In a similar manner, the *60-20-20* represents the percentage weights on April through July runoff, October through March runoff and previous year's index. The San Joaquin River unimpaired runoff is the sum of: Stanislaus River Inflow to New Melones Lake, Tuolumne River Inflow to New Don Pedro Reservoir, Merced River Inflow to Lake McClure and San Joaquin River Inflow to Millerton Lake.

Prior month unimpaired runoff is the sum of the runoff in the eight major rivers used in the two above indices.

State of California – The Resources Agency
DEPARTMENT OF WATER RESOURCES
P.O. Box 942836
Sacramento, CA 94236-0001

First Class